March 21, 2018

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Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Written *Ex Parte* Presentation
IB Docket No. 16-408

Dear Ms. Dortch:

Hughes Network Systems LLC ("Hughes") submits this *ex parte* letter to support, at least in part, ViaSat, Inc.'s ("ViaSat") petition for reconsideration ("Petition") of the following issues:[1] (i) adopting equivalent power flux density ("EPFD") limits to protect geostationary satellite orbit ("GSO") fixed satellite services ("FSS") from non-geostationary satellite orbit ("NGSO") FSS in the Ka-band; and (ii) making additional Ka-band spectrum available for FSS use.[2]

Specifically, Hughes agrees that the Commission should adopt suitable limits on aggregate EPFD in the uplink direction ("$EPFD_{UP}$") for Ka-band NGSO operations, as well as revise Section 25.289 of the Commission's rules to allow GSO operators to seek Commission recourse in obtaining additional remedies if existing EPFD limits prove insufficient to protect their satellite networks.[3] Additionally, Hughes supports permitting secondary FSS use of the 19.4-19.6 GHz and 29.1-29.25 GHz bands,[4] provided that such use is limited to individually licensed earth station communications. Commission reconsideration of these limited issues is supported by the record and, consistent with important policy objectives, will facilitate more

[1] *See* ViaSat Petition, IB Dkt. No. 16-408, at 2-8 (Jan. 17, 2018); *see also* ViaSat Reply, IB Dkt. No. 16-408, at 1-8 (Mar. 5, 2018).

[2] *See Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters,* Report and Order and Further Notice of Proposed Rulemaking, 32 FCC Rcd 7809, ¶¶ 19-21, 35-36 (2017) ("*NGSO FSS Order*").

[3] *See* ViaSat Petition at 2-5; *see also* ViaSat Reply at 1-5.

[4] *See* ViaSat Petition at 6-8; *see also* ViaSat Reply at 5-8.

intensive satellite use of Ka-band spectrum while ensuring interference protection of existing operations.

I. The Commission Should Develop Suitable Aggregate $EPFD_{UP}$ Limits and Further Ensure Interference Protection of GSO Operations If Existing EPFD Limits Prove Insufficient

As ViaSat and SES/O3b noted, the record underscores the importance of continuing Commission review and development of aggregate $EPFD_{UP}$ limits required to protect GSO operations.[5] Hughes agrees with SES/O3b that the Commission understandably was reluctant to adopt new aggregate $EPFD_{UP}$ limits based upon limited input from stakeholders and uncertainty about future NGSO deployment.[6] The solution, however, is to seek additional input and continue to develop the record on this issue, rather than relying upon existing ITU limits to fully protect GSO operations from multiple NGSO networks, as SES/O3b and ViaSat noted.[7]

Indeed, the Commission itself found that existing ITU EPFD limits do not include any aggregate $EPFD_{UP}$ limits (thus offering no interference protection to GSO satellite receivers from multiple NGSO networks in the uplink)[8] and "were not developed with the most advanced modern GSO networks in mind."[9] The Commission therefore notably refrained from finding that existing ITU limits are sufficient to protect Ka-band GSO operations. Absent such finding, the Commission is obligated to continue to review and develop suitable aggregate $EPFD_{UP}$ limits to ensure sufficient interference protection of existing and new GSO networks. Moreover, until such limits are found to provide sufficient interference protection, the Commission should adopt ViaSat's proposal to revise Section 25.289 of the Commission's rules to clarify NGSO operators' continuing obligation to protect GSO networks and remedy interference issues that may arise in the future, notwithstanding compliance with existing EPFD limits.[10]

II. The Commission Should Permit Secondary FSS Use of the 19.4-19.6 GHz and 29.1-29.25 GHz Bands for Individually Licensed Earth Stations

The record also reflects strong support, including from ViaSat, SES/O3b, and OneWeb, for allowing secondary FSS use of the 19.4-19.6 GHz and 29.1-29.25 GHz bands. Allowing such use is within the scope of this proceeding and consistent with the Commission's stated policy objectives because it ensures the most efficient use of the spectrum by allowing increased uses while protecting Iridium's mobile satellite service feeder links.[11] To ensure interference

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[5] *See* ViaSat Petition at 2-3; ViaSat Reply at 1-2; Opposition and Response of SES Americom, Inc. and O3b Limited, IB Dkt. No. 16-408, at 3-4 (Feb. 20, 2018) ("SES/O3b Response").

[6] SES/O3b Response at 4.

[7] *See* ViaSat Reply at 2-3; SES/O3b Response at 3-4.

[8] *See NGSO FSS Order* ¶ 34 n.74.

[9] *Id.* ¶ 35.

[10] *See* ViaSat Reply at 4-5.

[11] *See* ViaSat Petition at 6-8; ViaSat Reply at 5-8; SES/O3b Response at 4-5; Comments of WorldVu Satellites Limited ("OneWeb"), IB Dkt. No. 16-408, at 4 (Feb. 20, 2018).

protection of Iridum's feeder links, the Commission should limit FSS use of the spectrum to individually licensed earth station operations on a secondary basis. Absent any evidence of harmful interference to Iridum's operations, the Commission at a minimum should seek additional input and consider allowing such limited FSS use based upon a further developed record.

III. Conclusion

Based upon the foregoing, Hughes urges the Commission to grant ViaSat's requests to: (i) develop suitable aggregate $EPFD_{UP}$ limits and other measures required to protect Ka-band GSO operations; and (ii) allow secondary FSS use of the 19.4-19.6 GHz and 29.1-29.25 GHz bands for individually licensed earth station operations. Commission reconsideration of these limited issues will improve spectrum efficiencies and enhance satellite service options for consumers while protecting existing services.

Respectfully submitted,

/s/ Jennifer A. Manner

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